19

on the Laws ~~of~~ of Epidemics.

V. ~~that~~ is by its heat - cold - moisture - dry=
=ness, Density and rarity. This is partic=
=ularly noticed by Dr Sydenham in his history
of the fever which prevailed in London in
the years 1670 and 1671. -

Laws of Epidemics

1 All Epidemics ~~(the pestilence excepted)~~ are more or less affected in this degree of violence & other symptoms by the sensible qualities of the air; the small pox & measles partake of the type of inflam. fevers where they prevails in the winter & spring months. They are less inflam. in warm weather. They are both affected likewise by the changes which take place in the weather during the time of their prevalence. The yellow fever rises & falls in its violence & mortality with heat and cold, the moisture & dryness of the air. This has often been observed in Phila.da. — The Scarlatina anginosa feels the influence of the sensible qualities of the air in the most sensible manner. It was so uniformly

V 2 Epidemics are ~~of~~ influenced in their determinations to particular parts of the body ~~by the sensible qualities of the weather. The head, the lungs, the bowels & the limbs are the usual seats of these determinations. The lungs suffered most from this cause in the bilious epidemic of 1810. These determinations are further influenced~~

~~2 V Epidemics are affected in their direction by a different~~ ~~and fix their determinations to particular parts of the body~~ by the provisions & drinks of the current years. Vapid vegetables & unripe or decayed fruits will always dispose them to fall with more force upon the bowels than any other parts of the body. It is remarkable the same state of the atmosphere which produces Epidemics, disposes the vegetables & the animals which feed on them to produce disease, or to vary the symptoms of the ~~diseases~~ Epidemics. I have suspected the pump water of Philad^a has contributed to increase the malignity & danger of our yellow fever. –

inflam.: in the year 1794 in Philad.a at which time ~~all oth~~ the bilious fevers prevailed with highly inflam.y symptoms, as to require in many instances two ~~or~~ three & ~~some~~ sometimes four bleedings to cure it. To this law there are now & then exceptions. The influenza appears with nearly the same symptoms in all seasons & countries & in recursive years. & Ramazini mentions a petechial fever which prevailed for three successive years with the same ~~year~~ symptoms in very different and opposite kinds of weather.

3 No two epidemic fevers from different causes ~~of~~ and of unequal force can ~~prevail~~ affect the blood & spots at the same time. Many the Queen of William 3.rd is said to have died of a combination of the small pox & measles, but ~~they~~ one

It is related likewise ~~of~~ that a certain Robt Dodd a non conformist minister had the plague and the small pox at the same time. The pestilential and variolous Actions in these cases must have in succession or they have must have been alternated with each other

For

of them must have acted in succession to the other, although the intervals of their action may not have been perceived. I would as soon believe that a horse could pass & not as the same time, as that two actions take place in the blood vessels at the same time from which matters were secreted so unlike to each other as the matters which constitute the variolous & morbillous eruptions.

Of the predominance of the small pox over another contagion in the system Mr Hunter relates a remarkable instance in his history of the venereal disease. I shall say presently the ~~sys~~ predominating disease will always be different not only according to its natural force, but according to its age. It will generally be greater ~~than it~~ in its beginning than in its declining, or wanescent state. —

V the common language of physicians justifies this allusion, hence time immemo=rial, they have called the prevailing, the ~~sign~~ reigning Epidemic.

4 When two or three epidemic fevers appear at the same time, some one of them generally predominates over the others, so as blend some of its symptoms with them. Even contagious fevers blend their symptoms with fevers from miasmata, & from the sensible qualities of the Air [Patients in the small pox had black stools in the year 1798 when the yellow fever prevailed in Philadelphia]. There appears to be a kind of monarchy in Epidemics - which obliges such diseases as do not fly from the presence of the Royal disease, to do homage to it by wearing its livery. I shall illustrate this remark by the following facts. The common fevers in Dr. Sydenham's time partook of the fever of

V the Atmosphere ~~was~~ of Course was impreg=nated with the Seeds of it.

the small pox when that disease was epidemic. They were all he says attended with the salivation which is peculiar to the Variolous fever and hence it has been called "febris Variolosa" The small pox - here was the reigning disease, and Dr Mackiam tells us when the Ulcerous sore throat appeared in Plymouth, fevers of all kinds showed a disposition to sweat, — to eruptions &c ~~&c~~ to aphthous sores in the mouth. Even the small pox he says was attended with Ulcers in the throat & an unusual difficulty in swallowing. ~~But~~ the Ulcerous sore throat in this instance was the ~~prevailing~~ ~~Reigning~~ ~~Reigned~~ Epidemic. But the prevailing ~~reigning~~ Dominant ~~reigning~~ of an Epidemic in the Atmosphere has been observed to extend much further. Ramazzini tells us we are told by that Dr Bamstoff Physician General of the Hanovarian troops at modena informed him that

During the time a fever prevailed in the Army, the slightest wound was followed with all the Symptoms of that fever & often proved fatal. For a while he suspected the wounds were made by poisoned balls, but he was convinced of his mistake by being informed that wounds in the enemys ~~in~~ Camps were ~~equally fatal~~, ~~and attended~~ followed with the same Symptoms & as often terminated in Death. After this he prescribed for the fever as well as the wounds of his patients, and his practice was ~~fatal~~ attended with general success. This Combination of Epidemics is not confined to Ancient times nor to European Countries. The Autumnal fevers of August 1783 were all marked with more or less of the Symptoms of

This law of Epidemics was familiar to me when a Student of medicine, but the application of it at one time exposed me ~~to~~ a good deal of obloquy & ridicule. During the prevalence of the yellow fever in 1793 I was sent for to set a broken leg. As I had declined the practice of Surgery, and was oppressed with business of another kind, I advised the person who called upon me to send for another physician, but as the man who was injured, lay in a sickly part of the city, I advised his losing a little blood, and taking a purge, presuming he was charged with the miasmata of the prevailing Epidemic. The news of this prescription was reported thro' the city with ~~an~~ inferences from it ~~that I~~ of the most injurious ten-dency to my Character. Had the physicians who scouted my advice in this case, read & Observed more, they would have found many precedents for my prescription.

turn over to ==

the Scarlatina Anginosa such as pains behind the ears - sore throat - & swellings in the hands & feet; for the Scarlatina Angi=nosa was the reigning disease of the Season. The yellow fever ~~of the year 1798~~ has constantly exacted homage from all the diseases ~~it~~ that ~~pa~~ remained in its presence in all the years in which it has prevailed in Phila=delphia. In the year 1798 I saw it im=pose black evacuations from the bowels in a case of small pox which was brought by mistake into the City hospital. It has repeatedly produced the same discharges in the pneumonic fever ~~which~~ V

5 But I have not yet finished the history of the tyranny of a powerful & reigning epidemic. It not only demands ho=mage from all contemporary & inferior diseases, but it sometimes chases them

V proud, and independant as the plague appears in this, and many other instances, travellers tell us it is often driven suddenly from the city of Constantinople by the appearance of the small pox. But Dr Sydenham

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= Dr Cleghorn tells us, that such was the prevalence of a bilious constitution of the atmosphere at one time in minorca, that a broken leg was immediately followed by a bilious fever. Dr Stoll relates that a bilious fever once prevailed at Vienna, during which time a man fell from a height, & bruised his head. A speaking & coma succeeded. It was supposed

from its presence. Dr Sydenham tells us the plague suffered no rival, ~~no~~ and ad=mitted no auxilliary disease to assist it in the dreadful business of destroying nearly 100,000 of the citizens of London in the years 1664-5. ~~Dr~~ He tells us further that the measles in 1670 & the intermitting fever in 1671 banished the small pox for a while from the City of London, but in the beginning of the year 1672 when these two diseases had nearly spent themselves, the small pox came forward and ~~[illegible]~~ for a while became the solitary epidemic of the city. The measles banished the Scarlatina anginosa in the Spring of 1789 in Philadelphia, nor did it presume to show itself again until after the measles had retired from the city. The Influenza likewise ~~banished~~

his brain was injured. He was trepanned, but without discovering any signs of an injury being done to the brain. The man died, & was opened. His brain was sound, but his stomach, liver & bowels discovered all the ~~usual~~ morbid appearances which usually follow a fatal bilious fever. But a case occurred near ~~to the one before~~ this city in 1798 which was more in point than either of the two I have mentioned. ~~In which more fully vindicated my opinion respecting that has been so severely, ~~censured~~ ridiculed and condemned.~~ A young man fell from his horse at Germantown (where he had gone to avoid the yellow fever in Philad^a) and broke his leg. The wound exited the inest miasmata of the yellow fever the next day, and he died 5 days afterwards with a black vomiting under the care of two of ~~the most respectable~~ those very physicians who had ~~joined~~ united in the hue & cry against my opinion respecting the year 1793. To

chased the Scarlatina from the city in the Autumn of the same year, nor ~~it~~ did it return until the Influenza had ~~[illegible]~~ lost its power ~~upon~~ over the Systems of the citizens of Philadelphia.

From the facts I have mentioned, it would seem - that Epidemics of acknowledged superior force are sometimes chased away by Epidemics of less force. Thus we have heard of the ~~[illegible]~~ plague retiring from the small pox - of the small pox retiring from the Dracaeo, and of the Scarlatina retiring from the Influenza - all of which retiring diseases possess greater natural force than the diseases from which they fled. ~~- How shall we account for this apparent contradiction of the law of Epidemics which I am now illustrating?~~

this law of Epidemics there is now & then a running exception. Dr Willan says he saw the small pox - measles - hooping cough - and sore throat all prevail at the same time in London. This is possible either from ~~the~~ a temporary equality of this force, or most probably, from a this prevailing at very distant parts from other each in that great metropolis of the British empire. Dr Dick also tells us in the medical Repository that the mild & malignant bilious fevers prevailed at the same time in Alexandria in 1803 from the limited extent of two kinds of miasmata - the one from common sewers - the other from a putrid mass of oysters. I have seen the bilious fevers several times attended with different grades of violence & danger in this city from ~~the~~ a difference in the activity of miasmata generated ~~on~~ the Wharves & Docks, and in the ~~fabrics of~~ wastes Streets of the city. = ~~Reference to~~ — But ~~I have~~ p. 13.

= It is from the frequent occurrence of this circumstance in the ~~[illegible]~~, course of epidemics that I have elsewhere ~~they have [illegible]~~ compared ~~them to~~ them when violent, ~~to~~ at their

first appearance ~~to~~ ~~a~~ savage making a exterminating merciless war upon men, women & children, while in ~~its~~ their declining state they resemble a civilized foe that spares innocent blood, and ~~contends to~~ honorably contends with men only, and that

exhausted further.,
~~done in the facts under this law of Epidemics.~~
a reigning Epidemic often
~~A reigning Epidemic often raises its Symptoms~~
~~not only with intermittent or stationary fevers~~
~~from the sensible qualities of the Air, but it~~
some of its symptoms
imposes ~~those~~ upon chronic diseases. ~~Old~~ The
Gout, ~~and~~ Dropsy - madness &c all these evident
marks of its ~~p~~ power ~~dominion~~, & even the
fevers from the sensible qualities of the air
cling with them for months afterwards
the ~~signs~~ fragments of the livery they wore
while they were under the dominion of
the master Disease. ~~when to pay to~~ The bilious pleurisies
of the Winter and Spring, derive their name
from the ~~red~~ pushing of bile, or black floods
which accompany the inflam.n of the
lungs, after an Autumn in w.ch the bilious
fever has been the reigning epidemic.

V I have elsewhere Return to p: 7. 5th composed the impressions

more - for the sake of acquiring glory by conquest, than by the destruction of human life.+ ~~In this work of the Operation of an Epidemic, I shall say presently, there is sometimes an exception.~~

5 Epidemics appear in a great Variety of forms and Characters. I shall briefly enumerate them.

1 They appear with different degrees of force: There is a malignant small pox in which the whole body is covered with confluent eruptions, ~~and~~ there ~~are~~ ~~Epidemics in which~~ is a few distinct pustles scattered over the body, & there is a recurrent fever without a single pock. Again - there is an Autumnal bilious fever with a black vomiting, and the same disease in the form of an inflam^y or mild remitting & intermitting fever. V

These different grades in the same epidemic generally appear in years remote from

+ How shall we account for this apparent contradiction of the law of Epidemics which I am now illustrating? I answer, by having recourse to ~~one of the~~ one of the laws of habit ~~which~~ as it relates to Sensibility & irritability which I mentioned in our physiology. — The System after a while becomes so accustomed to the stimulus of ~~unpoisonous~~ the and virgin matter which produces a powerful epidemic that it ceases in a degree to be affected by it, and thus yields to the new impression. It is owing to the same change induced by habit upon the System that Epidemics begin by degrees before they disappear even of a disease of inferior power. To this explanation there are sometimes exceptions arising ~~there are many~~ ~~two~~ where they are not succeeded by any disease from the influence of the sensible qualities of the air acting upon the matter which produces ~~fever~~ some miasmatic fevers. The state of the weather certainly increases the force of the bilious fevers of the Autumn in their Declining or evanescent state, but it sometimes increases their force and danger. ~~This is the~~

in proportion to their Duration. In this case the weather produces new determinations to particular ~~parts~~ & delicate parts of the body, and thus places ~~renders~~ the remote cause of the disease in ~~a~~ a degree upon a footing with the stimulus of the remote cause of a new disease.

[Perhaps the ~~and~~ existence of the small small pox, measles, hooping cough, and sore throat in London ~~lat~~ at the same time in London mentioned by Dr Willan, and the other instances of a similar nature of dissimilar diseases prevailing at the same time in the same place, may be owing to the equality of their force induced by the re=lative times of their duration.]

which Diseases make upon the System to the different materials which painters em-
-ploy in ~~taking~~ ~~Drawing persons~~ taking likenesses of the human-
body. They are prepared with Water & with Oils. ~~and they~~ mild Epidemics are fevers in Crayons or Water Colors, - While ~~such as are~~ the same fevers when malignant, ~~one of these~~ stamps themselves upon the body in days and ~~durable~~ permanent colors in Oil.

each other, but they sometimes appear in succeeding years. Dr Alibert mentions from Dr Lautter, an account of an Epidemic intermitting fever ~~which~~ that prevailed at Luxemburg in the year 1759 which was accompanied with Symptoms of great inflamm: action such as pains in the breast, - a ~~hard~~ tense pulse, - a dry skin, - great thirst, - & viscid blood. The next year, the same fever returned with symptoms of great malignity such as great anxiety about the precordia, - cold sweats - a small - contracted & unequal pulse, & a livid color of the face. These two Epidemics yielded to remedies of an opposite nature. Happy Dr Lautter! had you ~~lived~~ resided in Philad^a instead of

Luxembourgh, & thus suddenly changed your practice, you would have lost your character for stability, and judgement & have been considered as a whimsical enthusiast ~~that~~ without any fixed principles in medicine, and liable to be seduced every year by a warm ~~and~~ & Distempered imagination! ~~But this~~

The same & of the same force

2 Epidemics are often attended with different symptoms in successive years, & the same symptoms ~~in different years~~ afford ~~are attended with~~ ~~affected~~ a different prognosis of this ~~of~~ in life and death in different years. ~~They are occasioned~~ This was evident in the Diff.

V The ~~last~~ Autumn of 1806 furnished an additio=
=nal proof of the truth of this remark. The fevers of that Season were ~~genera~~ frequently attended with pains in the bowels, and ~~they~~ generally assumed a chronic form. But they retained the ~~so~~ inflam^y character of the yellow fever, and yielded only to copious depletion particularly from the bowels - the part where the disease existed with the greatest force. ~~A~~ Many similar facts are to be met with the history of Epidemics. The Dysentery of 1794 in New Haven was succeeded by the yellow fever in 1795. ~~a~~ They were the same Disease & from the same cause, altho' the physicians of that town supposed it to be generated ~~etc~~ the former & imported it in the latter year. The bilious Colic & Cholera mor=
=bus - Often ~~supply~~ appear instead of the yellow fever, ~~that~~ while the plague appears in a more

yellow fevers which have appeared in Philad. since 1793 as you will see by an attentive perusal of my histories of them. Again Epidemics with apparently the same symptoms are attended with different degrees of mortality in different years. The yellow fever of 1803 in Southwark could not be distinguished by any of its symptoms from the yellow fever of 1803, and yet it yielded to a much less force of medicine, and was attended with much less mortality.

3 The same Epidemics, or rather Epidemics from the same cause, often affect different parts of the body in different people. The yellow fever of 1793, and of several succeeding years in Philad.a

years in the different forms of sweating sickness, Dysentery - bilious - madness - sore throat & inflam^n of the eyes. — Dr Sydenham says ~~the~~ Dysentery appeared with the epidemic fever of the years 1670 & 1671. From a belief that they were the same disease, he treated them with the same remedies, viz bleeding & purging, & thus cured them ~~th~~ both. — ~~return to 18.~~

V triumphed over all the whettings hackings and ~~hacknings~~ of the nosological ~~Chaises~~ carving knife

Die the 5th & 7th days, by a yellow skin or a black vomiting.

~~Epidemics require different remedies in the same year as to force them to be similar & over-ruling as they change as in 1768 & 1769 only at first.~~

fell with its principal force upon ~~appeared~~ in the same year ~~in different~~ ~~of~~ the head, throat, breast - stomach, liver, bowels - the nerves & sinuscles ~~& viscera~~ in different people.

The nosologists called the fever according to ~~varies~~ it affected, ~~it affected these~~ the parts of the body phrenitis - angina - ~~pneumonia~~ - Gastritis - Enteritis - & ~~Lumbago~~ - but ~~it was~~ the fever was a unit in all its forms and V ~~principal seat~~ ~~at the beginning of the~~ ~~attack & to be traced~~ ~~planes of attack~~. This Variety in its ~~nosological designations~~ planes of attack, depended perhaps - principally upon a Variety in the ~~temperaments~~ indispositions which invited the fever to previously debilitated & excitable parts. - The changes in the weather, and the nature of ~~the~~ an exciting cause probably contributed likewise to give

Sometimes
V fever ~~often~~ appears with uniform symptoms
uniform
& local affections. It did so in Charleston many
years ago
~~Dr McKittrick~~ according to Dr Lining. hence
Dr McKittrick says the yellow fever described
by Dr Lining is a different disease from
the yellow fever of the West Indies.

The more general an epidemic is,
the more uniform it is symptoms.
This is taken notice of by Dr Sydenham
in his history of the Intermitting fever
which prevailed in London in the years 1661.
2.3.4. – this fever was nearly universal,
& so uniform, that the fit came on at
the same hour of the day in all with the same symptoms
had it. The Break bone or bilious
fever of 1780 in this city was nearly
universal below Market Street, and its symptoms
universal in all who had it – hence it
& nearly the same in all cases.
yielded to the same mode of treat in all cases.
the Infusion =

a Different Determination of the Disease to different parts of the body. the same

4 Epidemics sometimes affect whole Communities without the Cooperation of an exciting cause as the small pox measles & Influenza – ~~while others of~~ and now and then the plague. This was the case with the last disease ~~at~~ Massailles in 1720 – again – ~~they~~ some Epidemics seldom affect without an obvious Imperceptible exciting cause. This ~~is~~ has been the case ~~in~~ with the yellow fever every time it has appeared in Philad^a since the year 1793.

5 Epidemics ~~sometimes~~ generally come on the w: great force, and gradually lose this violence & mortality – I took notice of this formerly. But ~~often~~ – they sometimes appear in a

= Jaundice is a very general disease. Few escape it, & hence the uniformity of its symptoms in all ages & seasons & countries

V with every change in the weather ~~not~~ not only. monthly - and weekly - but daily.

I am not the original Author of this remark. Bottallus in speaking of Epi-demics - has the following words." Ut est in omni temporibus, aliquot discri-men contemplabile, ita etiam in partibus ipsius diei"

Cap: 22. § 3.

Dr. Lining says that a Cloud passing before the sun ~~between~~ ~~the city of Charles.~~ ~~who~~ produced a sensible change in his patients in the yellow fever in Charleston. Changes in the ~~the~~ sensible qualities of the air ~~can~~ affect all other diseases. I attended a gentleman in an acute Rheumatism in April 1806 whose pains suddenly left him one night upon the coming on of a shower of rain. It is from the influence of the

mild form, and rise ~~with~~ ~~in a~~ with violence & mortality. Again they change their type

6 Epidemics sometimes appear with great force, suddenly spreading terror throughout a whole City & Country, and in a short time disappear, ~~with but a few days without~~ leaving the influence of ~~leaving some other~~ sudden changes in some of the sensible qualities of the Air. Thus Heavy rains often ~~in a~~ wash the yellow fever from our cities. High winds & storms have had the same effect in the West India Islands.

7 ~~From local causes~~ The same Epidemic is often different in different parts of the same Country. This arises from the influence of local causes particularly

Weather that the Dysentery sometimes takes the place of the Remitting fever & the remitting fever the place of the Dysentery in the same Season.

from ~~low~~ a local difference in the weather.

Epidemics are sometimes local in large cities. The yellow fever prevailed in Loreley's Court in Spain that only in 1803 & near Vine that only in 1802. This was justly ascribed to limited exhalations.

Epidemics sometimes affect persons of one country only. The ~~West India~~ recently arrived from the W. Indies French people generally escaped the yellow fever of 1793 in this city. A plague once prevailed at Basle which affected the Swiss only. The Germans, Italians & French people escaped it. The Jews often escape Epidemics that are fatal to persons of other religions. These exemp=tions from Epidemics appear to be the effect of national ~~temperaments~~ predispositions that

V The sore throat in its pestilential form is confined chiefly to children. — An Epidemic Jaundice prevailed among children only in Barbados Dr Hillary tells us in the year 1754.

are opposed to fever

Obdiet. The Jews are said to owe their preservation from malignant fevers to their plentiful use of onions & garlic in their Aliment.

10 Epidemics affect persons of <u>One</u> color only. The Indians escaped the fevers which carried off the White people at Martha's Vineyard in Massachusets, & the White people escaped the fevers which proved fatal to the Indians. The Blacks are rarely affected with the bilious fevers which prove fatal to the Whites of the Southern States. —

11 Epidemics affect persons of <u>One</u> Age only. In the year 1389 a plague destroyed children only without affecting Adults.

[These facts may serve to establish the

V Epidemics sometimes attack Adults and children at the same time. ~~too~~ as in Dec. & Jan. 1809 & 1810, ~~prevail~~ Epidemic Catarrh ~~is~~ felt alike in both these ages in this city.

truth of the account given ~~of~~ by Moses of one of the calamities which befell the Egyptians - viz: the mortality which prevailed among the first born of that nation - "from the first born of Pharoah that sat upon the throne, to the captive that was in the dungeon". It cannot be incredible, when we read of the same thing occurring in other countries, & in modern times. Bussemus mentions that ~~and~~ old people escaped a petechial fever that prevailed many years ago at Cerdena.

12 Epidemics affect persons of one sex or chiefly only.

~~In the year 1795~~ All the male children born at Derby in Connecticut in the year 1795 died, but not one female. The disease which thus discriminated the sexes was supposed to

V The yellow fever at Cadiz destroyed 5810 men, & but 1577 women, and in Seville 11,013 men, and but 3672 women in the year 1800. The predisposition of the male sex to ~~the~~ certain greater fevers extends even to such as are not epidemic: witness the ~~[illegible]~~ 500 ~~[illegible]~~ adult males related by Mr Fuller and no female or child dying of that fever ~~which~~ formerly mentioned.

be a modification of the Scarlatina. A plague in Italy in the year 1591 carried off 60,000 men and scarcely a single woman. The mortality of the yellow fever which prevailed at Malaga in 1804 was confined chiefly to the male sex. ~~An Epidemic in~~ ~~some years ago~~ ~~Dis of the Counties of Maryland was con=~~ ~~fined exclusively to women an acc^t of the~~ ~~Disease was communicated to me by the~~ The late Dr Leiper of Richmond while he resided in Maryland informed me that he had met with ~~with~~ a fever in one of the counties of that state which was confined exclusively to women. ~~Epidemics some=~~

13 Epidemics sometimes affect persons of a certain rank or condition in life only. In the year 1557 the Plague was confined

in France & Holland only to the poor. The year afterwards the same disease in the form of a Dysentery affected persons only in the higher ranks of Society.

14 Fevers affect members of the same Community - and even of the same family only. The former has often been Observed in monasteries, Colleges, and boarding Schools. The latter has occurred in some instances when the the members of the same family have lived many miles from each Other. ~~This singular predilection~~ ~~It is in fevers~~ ~~Much of fatigue the~~ It must be ascribed to local exhalation, or to a sameness of diet, ~~or~~ ~~temperament~~ predisposition, or to both combined in the same systems. —

15 Epidemics ~~prevail among~~ affect persons of all Countries,

all colors - all ages - both sexes, and all ranks, and predispositions at the same time. - The plague often appears in this mitigated and undistinguished form. Dr Stoll describes a Dysentery of this universal character, which prevailed in Vienna. No mode of life and no precautions, he says, defended from it.

16 Epidemics affects the human species exclusively, but they sometimes affect brutes at the same time, particularly one or more class of quadrupeds, such as Cats, dogs, Sheep, hogs, horses, and horned Cattle. The bilious fevers ~~of our Country~~ lately have affected Cats, horses and cattle in every part of our Country. Epidemics sometimes affect fish as well as land animals. Of this there have occurred several instances within these few years in the Waters of the United States.

~~Since the~~ ~~17~~ It must be obvious from

it must be obvious to you likewise that the Epidemic of a Season must be pursued in ~~with~~ many instances with the same remedies, however ~~it~~ it may disguise itself under the form of Diseases which require ~~other~~ another mode of treatment. Thus Dr. Sydenham acted in the intermitting fever which occurred between the years 1675 & 1680. It sometimes he says appeared in the form of Rheumatism and at other times ~~assumed~~ nephritic pains — all which cases he cured it with the same remedy that he cured the intermitting fever Viz: the Bark. He followed the same practice in the Dysentery formerly mentioned, & which appeared ~~[illegible]~~ with the fever of 1670. 1671 & 18[illegible] Epidemics appear for several years, and then disappear without any obvious cause. Thus the plague appeared annually in ~~Amsterdam between the years 1622 and 1628.~~ Germany, Hungary, Flanders, Denmark & England between 1349 and 1356. It appeared between 1622 and 1628 every year in Amsterdam, and ~~it~~ in Amsterdam, Naples and Genoa every year between 1654 and 1657. It is possible the yellow fever may now be upon the eve of ~~taking leave of~~ disappearing in our country — I do not say taking leave of it, for it cannot ~~ever~~ no more leave it, than it can be imported ~~The survival~~ into it. The survival of Epidemics ~~if~~ in all countries requires the concurrence of a change in the Atmosphere, & until we know on what this depends we cannot predict the times of their appearance at very distant periods.

the histories that have been given of Epide-
-mics, that ~~they~~ no Uniform mode of
treatment can be proper for them, & hence
we find in the accounts of them by practical
~~wri~~ Writers that the same remedies which
cure in one year, do harm, or kill in
other years - in the same epidemic. "all
died who were bled" in some of the ancient plagues
of Europe, & "all died who were not bled"
in others says Mr Webster in his elabo-
-rate history of pestilential diseases. Again

19 I have taken great pains to discover whether
Epidemics succeed each other in a regular &
stated order or ~~in~~ at regular periods, but I
do not find that this is the case. they are
as irregular in their appearance as ~~the~~
rain - hail - snow, or storms, & are equally
incapable of being reduced to ~~stand~~ rules.

To the history of Epidemics
which has been given & it may not be
improper to add two facts upon the habits
of ~~Endemics~~ Epidemics and endemics. They seem to annihilate
each other, or to change their forms. Thus
malignant fevers have chased Leprosy
from Jamaica, the glandular disease
has nearly chased intermittents from
Barbados. ~~and~~ The bilious & yellow fever
~~has driv~~ drove the chronic or flow conti.
fever from Philad.a for many years. For
several years past it has assumed its
former place ~~among~~ as an intermittent
disease. 2 ~~The same~~ Diseases ~~are~~ assume
new forms from improper treatment.
Thus Dr. Sydenham tells us that when the
small pox & Dysentery prevailed together
heating medicines when given in the
small pox ~~odd~~ brought on a dysentery with
it. Stimulating remedies in like

The following ~~circumstances~~ phenomena, have been observed to accompany & precede ~~many~~ malignant Epidemics ~~epidemics~~ from which we shall perceive that even in these calamities the governor of the Universe has not left himself without a Witness in favor of his goodness. ~~Common insects are more abundant than usual, and many new insects~~ They appear in the Atmosphere — in ~~the~~ animals & in the vegetable kingdom — and in the human body.

1 The ~~seasons are~~ weather is unusually hot, cold, wet, dry, or tempestuous just before, soon after, or during the prevalence of great Epidemics, or

2dly The winds blow from unusual quarters, and are accompanied with rains more frequently than in healthy seasons. Out of 120 pestilential years in England, 90 of them were preceded, or accompanied with an unusual quantity of rain, or 3dly The air is ~~unusually~~ calm during the prevalence

manner converted a common inflam^d yellow fever ~~into~~ into a malignant form of that disease, ~~and often~~ accompanied with petechia & hæmorrhages. - 90 to p: 29 ⊙

~~I shall apply these laws of Epidemics to when I come to our therapeutics & the practice of physic.~~

V Dr Wilson of Lewistown ~~in the Delaware state~~ has recorded, that a long calm with a smoky vapor always preceded the violent epidemics of ~~the~~ Lafayette county in the state of Delaware. —

N 2^ly The diseases which precede malignant Epidemics are always more violent than in common years. A pestilential fever preceded the great plague of London according to Dr Sydenham. The bilious fevers of 1791 & 1792 ~~in Philad~~ which preceded the yellow fever of 1793 in Philad^a were so inflammatory

of pestilence. It was so in some of the plagues of ancient Greece according to Hippocrates. "Aer one sine Aura". It was so in London Dr. Baynard says in 1664-5 ~~and in Philad^a in 17~~ insomuch that a weather cock was not seen to move. Mildews fell at this time in an unusual quantity. ~~The~~ ~~was~~ an unusual ~~& Tal~~ & long absence of wind prevailed in Philad^a in the year 1793. ~~I have said~~ ~~In Boston~~ The white paint of boats was observed to be changed to a dusk color by the atmosphere during the prevalence of the yellow fever in Boston in the year 1801.

3^ly: A disease among Cats has often preceded Epidemics. This has been frequently observed in this City, as well as in ~~London~~ & several European Countries. Dr Burnia describes this disease, & says that the

as to forbid the use of bark and Guiteau only to two or three bleedings. ~~Inflam.~~ The 2d diseases which follow malignant fevers like those which precede them always partake of an inflam^d character. This has been uniformly observed in those years in Philad^a in which the yellow fever has not been epidemic since the year 1793. —

V during the prevalence of the yellow fever, but

on the 2nd day
Cats cease to emit electrical sparks from their backs when rubbed, and that when thrown from a height they do as usual fall upon their feet. — Birds have been observed to disappear just before the appearance of an Epidemic. ~~&~~ ~~bodies of their cats~~ They panted for breath Dr Bayard tells us, and flew heavily in the air during the plague in London in 1664.5 and some of those ~~some of~~ ~~them~~ that were confined, died in their cages. Pigeons ~~did~~ ~~in great numbers~~ were frequently found dead in the woods with during the prevalence of the yellow fever in Luzerne County in Pennsylvania in the year 1799. The house fly ~~has~~ disappeared from our cities, ~~common~~ insects are more abundant than usual, and many new insects appear in pestilential years. Mosquitoes never fail to accompany a bilious Epidemic. The blistering fly has lately appeared with our yellow fever. This coincidence of insects with pesti=

=lence

may serve still further to establish the truth of the account given by Moses of the plagues of Egypt. "Flies, locusts & lice (the latter as abundant as the dust of the earth) accompanied the boils, blains & murrain which destroyed the Egyptians & their cattle. ~~We see here great~~ It is agreeable to ~~discov-~~ ~~ver~~ ~~possible discoveries & observations in~~ observe this confirming by Science, ~~adding~~ its discoveries & observations the truth of ~~the~~ Revelation. — or presumption of trees, ~~or changed~~ emit a peculiar smell, ~~or fruits and vegetables are often~~ ~~of God~~ = ~~by the cause of the prevalence of an Epidemic~~ ~~fruit~~ ~~fruits~~ and sometimes die, & fruits are small, - knotty, and disposed to rot soon, ~~or~~ in pestilential seasons. These changes in vegetables have been observed in the neighborhood of Philad.a nearly every year in which the yellow fever has been

epidemic.

5 During the prevalence of great & mortal Epidemics - the pulse in persons who are in apparent health is preternaturally fre-quent - slow, or weak according to the force of the impressions which act upon ~~them~~ it. It was preternaturally frequent in every experiment I made upon it in the year 1793. At the same time many people com-plain of head ach - languor - sickness at stomach and discover a greater disposition than usual to faint & to sweat, while others are perfectly relieved from habitual chronic pains & indispositions of all kinds from the morbid impressions elevating the system from such morbid action to the tone of health or above it. Di:

V ~~Chidrans laws~~ Is it to awaken the ~~fears~~ vigilance
of a whole City to ~~guard every~~ Shut its gates,
and guard every avenue that ~~leads~~ led to it,
lest a ~~passager~~ passenger that has escaped from
~~one of those~~ this vessel from its station at
the quarantine ground should ~~upon~~ enter
the city, and spread desolation & death from
the effluvia of his cloaths among all its
inhabitants? — No - no - no gentlemen!
~~for opinions have been fortified by the~~ Nature
Does not produce these derangements in her
operations to fortify error, nor to sanction the absurd
Opinions of Universities, Colleges of physicians, or
the laws of misguided, and cruel governments.
She ~~bids us~~ calls upon us by all the phenomena
I have mentioned to ~~look at home for the~~ seek in the filth of our
cities ~~and~~ ~~cause of~~ the exhalations of our marshes ~~for~~ ~~the causes~~ and in an infant constitution of our atmos-
-phere for the causes of all our plagues & yellow fevers.
~~etc~~

says women are more apt to miscarry ~~than at any other~~ during the prevalence of pestilential epidemics than at any other time — from the irritation of the morbid atmosphere upon them. —

But whence these changes in the air in certain diseases — in certain ~~vegetable & animal~~ vegetables & animals ~~& effects blighting~~, ~~and on the~~ & in the human body? Why this universal sympathy in ~~the surrounding~~ animate & inanimate nature ~~creation~~ with the approaching, existing sufferings of man? — So is to give notice ~~of~~ that a vessel has sailed from a sickly port with the seeds of pestilence ~~in her hold — in her pitch~~ packed up in hogsheads of sugar — or smeared over logs of mahogany, or ~~cleaving to~~ the sails and timbers of ~~the~~ a ship? V. — ~~Let the phenomena and~~

(6) This inflam. constitution of the air sometimes
& pervades the whole globe, but it is
more frequently confined to a part of
the globe. It sometimes affects cities, &
villages only, and in succession in different
years. In this respect it follows the laws
of heat, cold, rain, hail and snow. It sometimes
predominates so much as to produce
disease, with but a feeble exciting cause,
but it more frequently requires the
cooperation of miasmata or contagion.
The yellow fever ~~has not~~ which is the
common bilious fever exalted by the
change in the Atmosphere to the grade of
plague, has not, ~~[illegible]~~ been
produced in a single instance in the U. States,
without the ~~[illegible]~~ cooperation of ~~[illegible]~~ miasmata
from putrefied Animal, or Vegetable substances. This is a most
consoling ~~that~~ under the presume=

(L)

You must have perceived gentlemen how much I am indebted for the facts I have delivered to you upon the laws of Epidemics to the writings of Dr Sydenham. Upon those writings upon this subject it may be truly said of Dr Sydenham ~~what Mr~~ with a little variation what Mr Pope says of Sir Isaac Newton.

"Epidemics & ~~their~~ laws lay hid in night,
God said let Sydenham be, & all was light.

Permit me gentlemen to recommend his works to your early, your frequent and attentive perusal. An edition of them may be had in this city at a much less price than the London edition. The notes which are added to them are intended to accommodate ~~his practice~~ them to the climate & diseases of the United States, and to the principles & practice taught in these lectures. They are not what ~~the~~ ~~editor~~ I ~~indeed~~ wished them to be, but such

V ~~Lose~~ study them not only every year, but every season, every month, every week, and according to Botallus every day during their prevalence. It is ~~this~~ only by ~~this~~ continuing to be ~~[illegible]~~ students of medicine as long as you live, that you can ever become ~~practical~~ practical and successful physicians. —

as they are I hope they will render the useful to an American student, and practitioner of medicine.

Here then we close our history of the ~~Epidemics~~ laws of Epidemics. I have only opened a fruitful field for your future cultivation, from which I hope you reap ample harvest of wealth & reputation instead of those briars & thorns which have been the distinguishing products of my labors in it. But even those rich harvests cannot be reaped without some labor. It ~~will be necessary~~ must be obvious to you that every new epidemic ~~is~~ must necessarily become a fresh object of investigation, and if ~~they~~ Epidemics are variedly all the circumstances I have mentioned, it will be necessary for you to ~~continue~~ ~~Students of medicine as long as you~~